

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/043124 A3

(51) International Patent Classification⁷: **A61K 31/395**, 31/44, 31/47, C07D 213/02, 215/00, 217/00, 401/02

(21) International Application Number:
PCT/US2004/036409

(22) International Filing Date:
1 November 2004 (01.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/515,631 30 October 2003 (30.10.2003) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
21 July 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/043124 A3

(54) Title: CHIRAL 1,8-DIARYLNAPHTHALENES, METHODS OF MAKING THEM, AND THEIR USE AS SENSORS

(57) Abstract: One aspect of the invention relates to 1,8-diarylnaphthalene compounds. In certain embodiments, a compound of the invention is an *N*-oxide of a 1,8-diarylnaphthalene. In certain embodiments, the aryl group is an optionally substituted acridyl group. In certain embodiments, a compound of the invention is a single stereoisomer. In certain embodiments, a compound of the invention is a single enantiomer. Another aspect of the present invention relates to a method of detecting the presence of an analyte in a sample by monitoring the fluorescence of a compound of the invention in a sample. In certain embodiments, the analyte is a metal ion. Another aspect of the present invention relates to a method of determining the enantiomeric purity of an analyte by monitoring the fluorescence of a compound of the invention in the presence of the analyte. In certain embodiments, the analyte is a compound that is capable of hydrogen bonding.